

**TRANSMITTER AND ASSOCIATED METHOD FOR REDUCING THE
ADJACENT CHANNEL POWER DURING WIRELESS COMMUNICATIONS**

ABSTRACT OF THE INVENTION

5 A transmitter for improving the spectral characteristics of a transmitted output
signal includes a phase modulator for receiving a signal and modifying the phase of the
signal, a power amplifier for receiving the phase modified signal from the first operation
and amplifying the phase modified signal, and an amplitude modulator for receiving the
amplified phase modified signal and modifying the amplitude of the amplified phase
10 modified signal. Although the phase and amplitude modulation are performed separately
in order to minimize the amplitude distortion without complicating the design of the
phase modulator, the combined effect of the phase and amplitude modulation is to filter
the out of band spectral emissions of the transmitted output signal. Additionally, the
transmitter can store the phase shift and amplitude modulation information in a table for a
15 variety of different input data sequences such that the phase shift and amplitude
modulation information need merely be looked up in the table as opposed to being
calculated in response to each digital signal input